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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/934,180	08/20/2001	Juan-Antonio Ibanez	52275-007USPT	7670
27045	7590	09/28/2005	EXAMINER	
ERICSSON INC. 6300 LEGACY DRIVE M/S EVR C11 PLANO, TX 75024			RYMAN, DANIEL J	
			ART UNIT	PAPER NUMBER
			2665	

DATE MAILED: 09/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/934,180

Applicant(s)

IBANEZ ET AL.

Examiner

Daniel J. Ryman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-67 is/are rejected.
- 7) ☒ Claim(s) 66 and 67 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/30/2002.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 1/30/2002 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. Specifically, the abstract for JP 9672995 was not received.

Drawings

2. Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 66 and 67 are objected to because of they are duplicates of one another. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-16, 21-35, and 41-67 are rejected under 35 U.S.C. 102(e) as being anticipated by Asokan et al. (PG Pub 2001/0017856).

6. Regarding claim 1, Asokan discloses a system for duplicate address detection in a communication network, said system comprising: a plurality of communication nodes, a particular one of said communication nodes generating a tentative interface address and transmitting a solicitation message including the tentative interface address (¶¶ 30-38, 104); and a proxy node (GGSN) for receiving the solicitation message, said proxy node operable to determine from the solicitation message whether the tentative interface address is allocated to another of said plurality of communication nodes (¶¶ 30-38, 97-98, 106-108), and further operable to send a response message to said particular communication node if said proxy node determines that the tentative interface address is allocated to another of said plurality of communication nodes, said response message indicating that the tentative interface address is already in use (¶¶ 30-38, 110-111).

7. Regarding claim 2, Asokan discloses that the particular communication mode transmits a context activation message to the proxy node at least as early as said transmission of the solicitation message, said context activation message indicative of a request for an activation of a packet data protocol context (¶¶ 97-98, 104-108).

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8. Regarding claim 3, Asokan discloses that the proxy node, responsive to the context activation message, generates a packet data protocol context associated with the particular communication node (§§ 97-98, 104-108).
9. Regarding claim 4, Asokan discloses that the packet data protocol context is activated in accordance with IPv6 (§§ 94-95, 97-98, 104-108).
10. Regarding claim 5, Asokan discloses that the particular communication node is allocated the tentative interface address as an allocated interface address if the proxy node determines that the tentative interface address is not allocated to another of said plurality of communication nodes (§§ 30-38, 97-98, 106-108).
11. Regarding claim 6, Asokan discloses that the particular communication node begins using the allocated interface address when no response is received to the solicitation message (§§ 8, 111) where the router carries out neighbor discovery such that it sends no response when no node has a duplicate identifier.
12. Regarding claim 7, Asokan discloses that the particular communication node begins using the allocated interface address when no response is received after repeating the solicitation message a predetermined number of times (§§ 8, 111) where the predetermined number of times can be any number.
13. Regarding claim 8, Asokan discloses that the proxy node transmits a router advertisement message including network address prefix information (§§ 97-98, 116-118).
14. Regarding claim 9, Asokan discloses that the transmission of the router advertisement message is performed automatically by the proxy node (§§ 97-98, 116-118).

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15. Regarding claim 10, Asokan discloses that the transmission of the router advertisement message is in response to the receiving, at the proxy node, of a router solicitation message transmitted by the particular communication node (¶¶ 97-98, 116-118).

16. Regarding claim 11, Asokan discloses that the particular communication node receives the router advertisement message and determines a full network address associated with the particular communication node from the router advertisement message (¶¶ 97-98, 116-118).

17. Regarding claim 12, Asokan discloses that the particular communication node receives the router advertisement message, extracts the network address prefix information from the router advertisement message, and concatenates the network prefix address prefix information and the tentative interface address to form a full network address associated with the particular communication node (¶¶ 97-98, 116-118).

18. Regarding claim 13, Asokan discloses that the full network address comprises a site-local address (¶¶ 8, 97-98, 104-108, 116-118) where the IPv6 address includes the Interface-Identifier which is unique to the site.

19. Regarding claim 14, Asokan discloses that the full network address comprises a global address (¶¶ 8, 97-98, 104-108, 116-118) where the IPv6 address is globally unique.

20. Regarding claim 15, Asokan discloses that the proxy node stores at least a characteristic portion of a full network address in a packet data protocol context associated with the particular communication node (¶¶ 33-38, 97-98, 106-108).

21. Regarding claim 16, Asokan discloses that the tentative interface address comprises a link-local address (¶¶ 97-98, 104-108).

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22. Regarding claim 21, Asokan discloses that the particular communication node comprises a mobile station (¶¶ 33-38, 97-98, 106-108).

23. Regarding claim 22, Asokan discloses that the particular communication node comprises terminal equipment (¶¶ 33-38, 97-98, 106-108).

24. Regarding claim 23, Asokan discloses that the proxy node comprises a gateway node (¶¶ 33-38, 97-98, 106-108).

25. Regarding claim 24, Asokan discloses that the gateway node comprises a gateway general packet radio service support node (GGSN) (¶¶ 33-38, 97-98, 106-108).

26. Regarding claim 25, Asokan discloses that the proxy node comprises a network bridging device for interfacing the plurality of communication nodes to at least one packet data network (¶¶ 33-38, 97-98, 106-108).

27. Regarding claim 26, Asokan discloses that the communication network comprises at least one of a cable modem network, an IMT-2000 network, a CDMA-2000 network, a UMTS network, and a General Packet Radio Service (GPRS) network (¶¶ 33-38, 97-98, 106-108).

28. Regarding claim 27, Asokan discloses a method for duplicate address detection in a communication network, said method comprising: generating, by a first one of a plurality of communication nodes, a first tentative interface address (¶¶ 30-38, 97-98, 106-108); transmitting, from the first communication node, a first solicitation message including the first tentative interface address (¶¶ 30-38, 97-98, 106-108); receiving, at a proxy node (GPRS), the first solicitation message (¶¶ 30-38, 97-98, 106-108); determining, by the proxy node, that the first tentative interface address is available for use by the first communication node (¶¶ 30-38, 97-98, 106-108); allocating the first tentative interface address as a first allocated interface address

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associated with the first communication node (¶¶ 30-38, 97-98, 106-108); generating, by a second one of the plurality of communication nodes, a second tentative interface address (¶¶ 30-38, 97-98, 106-108); transmitting, from the second communication node, a second solicitation message including the second tentative interface address (¶¶ 30-38, 97-98, 106-108); receiving, at the proxy node, the second solicitation message (¶¶ 30-38, 97-98, 106-108); determining, by the proxy node, whether the second tentative interface address corresponds to the first allocated interface address (¶¶ 30-38, 97-98, 106-108); generating a first response message if the proxy node determines that the second tentative interface address corresponds to the first allocated interface address (¶¶ 30-38, 110-111); and transmitting the first response message to the second communication node (¶¶ 30-38, 110-111).

29. Regarding claim 28, Asokan discloses generating, by the first communication node prior to the step of generating the first tentative interface address, a context activation message, the context activation message indicative of a request for the activation of a packet data protocol context (¶¶ 97-98, 104-108); transmitting the context activation message from the first communication node to the proxy node (¶¶ 97-98, 104-108); and generating, at the proxy node, a packet data protocol context associated with the first communication node (¶¶ 97-98, 104-108).

30. Regarding claim 29, Asokan discloses generating, at the proxy node, a router advertisement message, the router advertisement message including network address prefix information (¶¶ 97-98, 116-118); transmitting, from the proxy node, the router advertisement message (¶¶ 97-98, 116-118); receiving, at the first communication node, the router advertisement message (¶¶ 97-98, 116-118); and determining, using the router advertisement

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message, a full network address associated with the first communication node (¶¶ 97-98, 116-118).

31. Regarding claim 30, Asokan discloses that the step of determining the full network address comprises: extracting the network address prefix information from the router advertisement message (¶¶ 97-98, 116-118); and concatenating, by the first communication node, the network address prefix and the first allocated interface address to form the full network address associated with the first communication node (¶¶ 97-98, 116-118).

32. Regarding claim 31, Asokan discloses that the step of generating the router advertisement message is in response to the receiving, at the proxy node, of a router solicitation message generated by and transmitted from the first communication node (¶¶ 97-98, 116-118).

33. Regarding claim 32, Asokan discloses that the first tentative interface address comprises a tentative interface identifier (¶¶ 97-98, 104-108).

34. Regarding claim 33, Asokan discloses that the full network address comprises a site-local address (¶¶ 8, 97-98, 104-108, 116-118) where the IPv6 address includes the Interface-Identifier which is unique to the site.

35. Regarding claim 34, Asokan disclose that the full network address comprises a global address (¶¶ 8, 97-98, 104-108, 116-118) where the IPv6 address is globally unique.

36. Regarding claim 35, Asokan discloses that the communication network comprises a General Packet Radio Service (GPRS) network and the proxy node comprises a gateway support node (¶¶ 33-38, 97-98, 106-108), said method further comprising the steps of: storing, by the gateway support node, at least a characteristic portion of a full network address in a packet data protocol context associated with the first communication node (¶¶ 33-38, 97-98, 106-108);

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generating, by the gateway support node, a context modification message indicative of the storing of the at least a characteristic portion of the full network address (§§ 33-38, 97-98, 106-108); and transmitting, from the gateway support node to a serving support node, the context modification message (§§ 33-38, 97-98, 106-108).

37. Regarding claim 41, Asokan discloses a proxy node (GGSN) for duplicate address detection in a communication network, said proxy node comprising: an input interface for receiving a solicitation message including a tentative interface address, the tentative interface address being associated with a particular one of a plurality of communication nodes (§§ 30-38, 97-98, 106-108) where it is inherent that the node has an input interface; a processor operable to determine from the received solicitation message, and using obtained information relating to interface addresses that are currently allocated to the plurality of communication nodes, whether the tentative interface address is allocated to another of the plurality of communication nodes, and generate a response message if the processor determines that the tentative interface address is allocated to another of said plurality of communication nodes (§§ 30-38, 97-98, 106-111); and an output interface in communication with said processor, for transmitting said response message to the particular communication node (§§ 30-38, 97-98, 106-111).

38. Regarding claim 42, Asokan discloses means for storing the information relating to interface addresses that are currently allocated to the plurality of communication nodes in a memory associated with the proxy node (§§ 30-38, 97-98, 106-108).

39. Regarding claim 43, Asokan discloses means for retrieving the information relating to interface addresses that are currently allocated to the plurality of communication nodes from a support node (§§ 30-38, 97-98, 106-111).

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40. Regarding claim 44, Asokan discloses that the support node comprises a gateway general packet radio service support node (GGSN) (¶¶ 30-38, 97-98, 106-111) where the proxy node can store the addresses in itself such that it can retrieve the addresses from itself.

41. Regarding claim 45, Asokan discloses that the processor is further operable to receive a context activation message indicative of a request from the particular communication node for the activation of a packet data protocol context, and generate a packet data protocol context associated with the particular communication node (¶¶ 97-98, 104-108).

42. Regarding claim 46, Asokan discloses that the processor is further operable to transmit a router advertisement message, the router advertisement message including network address prefix information (¶¶ 97-98, 116-118).

43. Regarding claim 47, Asokan discloses that the transmitting of the router advertisement message is in response to a reception of a router solicitation message transmitted from the particular communication node (¶¶ 97-98, 116-118).

44. Regarding claim 48, Asokan discloses that the processor is further operable to store at least a characteristic portion of a full network address in a packet data protocol context associated with the particular communication node (¶¶ 30-38, 97-98, 106-111).

45. Regarding claim 49, Asokan discloses that the processor is further operable to transmit a context modification message indicative of the storing of the at least a characteristic portion of the full network address (¶¶ 30-38, 97-98, 106-111).

46. Regarding claim 50, Asokan discloses that the particular communication node comprises a mobile station (¶¶ 33-38, 97-98, 106-108).

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47. Regarding claim 51, Asokan discloses that the proxy node comprises a gateway node (¶¶ 33-38, 97-98, 106-108).

48. Regarding claim 52, Asokan discloses that the gateway node comprises a gateway general packet radio service support node (GGSN) (¶¶ 33-38, 97-98, 106-108).

49. Regarding claim 53, Asokan discloses that the proxy node comprises a network bridging device interfacing the plurality of communication nodes to at least one packet data network (¶¶ 33-38, 97-98, 106-108).

50. Regarding claim 54, Asokan discloses that the communication network comprises at least one of a cable modem network, an IMT-2000 network, a CDMA-2000 network, a UMTS network, and a General Packet Radio Service (GPRS) network (¶¶ 33-38, 97-98, 106-108).

51. Regarding claims 55 and 61, Asokan discloses a method for duplicate address detection in a communication network, said method comprising: receiving, by a proxy node (GGSN), a solicitation message including a tentative interface address, the tentative interface address being associated with a particular one of a plurality of communication nodes (¶¶ 30-38, 104); determining, from the solicitation message, whether the tentative interface address is allocated to another of said plurality of communication nodes (¶¶ 30-38, 97-98, 106-108); and sending a response message to said particular communication node if, in said determining step, the proxy node determines that the tentative interface address is allocated to another of said plurality of communication nodes (¶¶ 30-38, 110-111).

52. Regarding claims 56 and 62, Asokan discloses receiving, from the particular communication node, a context activation message indicative of a request from the particular communication node for the activation of a packet data protocol context (¶¶ 97-98, 104-108);

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and generating a packet data protocol context associated with the particular communication node (¶¶ 97-98, 104-108).

53. Regarding claims 57 and 63, Asokan discloses generating a router advertisement message, the router advertisement message including network prefix information (¶¶ 97-98, 116-118); and transmitting the router advertisement message (¶¶ 97-98, 116-118).

54. Regarding claims 58 and 64, Asokan discloses generating the router advertisement message is in response to a reception of a router solicitation message from the particular communication node (¶¶ 97-98, 116-118).

55. Regarding claims 59 and 65, Asokan discloses storing at least a characteristic portion of a full network address in a packet data protocol context associated with the particular communication node (¶¶ 97-98, 104-108).

56. Regarding claims 60, 66, and 67, Asokan discloses transmitting a context modification message indicative of the storing of the at least a characteristic portion of the full network address (¶¶ 97-98, 104-108).

Claim Rejections - 35 USC § 103

57. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

58. Claims 17-20 and 36-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asokan et al. (PG Pub 2001/0017856).

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59. Regarding claims 17 and 36, Asokan does not expressly disclose that the particular communication node subsequently generates a new tentative interface address and transmits a new solicitation message including the new tentative interface address. Rather Asokan discloses in the primary embodiment that the GGSN generates a new tentative interface address (§ 119). However, Asokan also discloses that in other embodiments where the nodes try to carry out neighbor discovery, the GGSN acts as a proxy for neighbor discovery messages and sends appropriate replies to the nodes (§§ 110-111). Asokan also discloses that, when a node performs neighbor discovery, the node sends an additional neighbor solicitation using a new interface identifier when it discovers that the previous interface identifier is in use (§ 8). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the particular communication node subsequently generate a new tentative interface address and transmit a new solicitation message including the new tentative interface address in order to allow the node to perform neighbor discovery.

60. Regarding claim 18, Asokan discloses that the proxy node receives the new solicitation message, determines whether the new tentative interface address is allocated to another of said plurality of communication nodes, generates a new response message to the particular node if the proxy node determines that the new tentative interface address is allocated to another of said plurality of communication nodes, and allocates the new tentative interface address as a new allocated interface address if the proxy node determines that the new tentative interface address is not allocated to another of said plurality of communication nodes (§§ 33-38, 97-98, 106-108).

61. Regarding claim 19, Asokan discloses that the proxy node receives the new solicitation message, and transmits a new response message to the particular node if the allocation of an

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additional interface address associated with the particular node is not allowed (¶¶ 33-38, 97-98, 106-108).

62. Regarding claim 20, Asokan discloses that the generation of the new tentative interface address is performed in accordance with a stateless IPv6 address autoconfiguration procedure (¶¶ 8, 33-38, 97-98, 106-108).

63. Regarding claim 37, Asokan discloses allocating the third tentative interface address as a second allocated interface address associated with the first communication node if the third tentative interface address is not allocated to one of the plurality of communication nodes (¶¶ 33-38, 97-98, 106-108).

64. Regarding claim 38, Asokan discloses generating a second response message if the proxy node determines that the third tentative interface address is allocated to one of the plurality of communication nodes; transmitting the second response message to the first communication node; receiving, at the first communication node, the second response message; and transmitting, from the first communication node, a third solicitation message including a fourth tentative interface address in response to the second response message (¶¶ 33-38, 97-98, 106-108).

65. Regarding claim 39, Asokan discloses allocating the third tentative interface address as a third allocated interface address if the proxy node determines that the fourth tentative interface address is not allocated to one of the plurality of communication nodes. (¶¶ 33-38, 97-98, 106-108).

66. Regarding claim 40, Asokan discloses generating a second response message if the allocation of an additional interface address associated with the first communication node is not

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allowed; and transmitting the second response message to the first communication node (¶¶ 33-38, 97-98, 106-108).

Conclusion

67. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hutchison et al. (USPN 5,327,534) see entire document which pertains to detection of duplicate addresses. Ohno et al. (USPN 6,219,715) see entire document which pertains to detection of duplicate addresses. Kawanaka (USPN 6,493,340) see entire document which pertains to automatic network address duplication detection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 7:00-4:30 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DJR

Daniel J. Ryman
Examiner
Art Unit 2665



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